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A Comprehensive Nutrition Program for the Northwest Territories

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A COMPREHENSIVE
NUTRITION PROGRAM
FOR THE NORTHWEST TERRITORIES

December 1976

HEALTH CARE PLAN

DEPARTMENT OF SOCIAL DEVELOPMENT

YELLOWKNIFE, NORTHWEST TERRITORIES

Tabled at the 62nd Session
of the Legislative Assembly
of the Northwest Territories

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INTRODUCTION:

Nutrition has a strong impact on health and the style and quality of life. It affects both physical and mental development, susceptability to disease and the ability to resist infections and tolerate stress.

One of the objectives of the Health Care Plan, Department of Social Development is the promotion, improvement and preservation of the health of the residents of the Northwest Territories. Nutrition being a vital factor in health, the promotion and improvement of nutrition is of interest and concern to the Department of Social Development, Government of the Northwest Territories.

The development of a comprehensive Nutrition Program is essential to promote the optimum nutritional status of the residents of the Northwest Territories. This is the objective of the Department of Social Development.

Nutrition Services and Education in the past have been provided by the Department of Education, Government of the Northwest Territories and the Department of National Health and Welfare, Federal Government. In order to implement and assess the proposed Nutrition Program cooperation need exist between these three departments.

I. TOWARD A COMPREHENSIVE NUTRITION PROGRAM

A. OBJECTIVE

The objective of a Nutrition Program is to improve the nutritional status of the residents of the Northwest Territories.

B. DEVELOPMENT

A comprehensive nutrition program is one that offers a complete range of nutrition services to meet the needs of the people at the individual, family and community level. To facilitate the development of such a program the following steps must be taken;

1. Identification of the nutritional needs of the people in all aspects of life.

2. Assessment of existing nutrition services.

3. Research in areas with a nutritional component such as:

   a) Sociological, psychological and cultural factors affecting food habits;
   b) Nutritional composition of country foods;
   c) Incidence of disease states such as otitis media, for example, that may be due to poor nutrition;
   d) Sanitation practices that in conjunction with poor nutrition may lead to disease states;
   e) Food costs and availability of commercial foods;
   f) Availability and consumption of country foods.

C. IMPLEMENTATION

In order to effectively implement a nutrition program, the nutrition services offered must be integrated with existing health and educational services in each community.

The successful implementation of the program will depend on cooperation between health and education related personnel at both the administrative and field level.

D. ASSESSMENT

The design of evaluation tools is essential to assess the effectiveness of each nutrition service offered. The information obtained from this assessment can then be utilized towards the development of further Nutrition Services.

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II. DIFFICULTIES ENCOUNTERED IN ESTABLISHING A PROGRAM TO DATE

A. NUTRITION POLICY

A Nutrition Policy has not existed for the Northwest Territories. As a result, an effective Nutrition Program has not been developed to meet the needs of the residents.

B. NUTRITION SERVICES

Although Nutrition Services have been provided by both the Federal Government and the Government of the Northwest Territories, they were not components of a Nutrition Program. Such services have lacked inter-departmental coordination and hence the continuity essential to an effective Nutrition Program.

C. COMMUNICATION

Inadequate lines of communication within and between both the Federal and Territorial Departments has resulted in a lack of knowledge of nutrition services being offered.

D. STAFF

Adequate nutrition services have not been developed and implemented because of an insufficient number of qualified staff hired for this purpose. At present there are three nutrition related personnel employed by the Federal and Territorial Governments. Only one person is employed as a full time Nutritionist. This is the Regional Nutritionist employed by the Federal Government. The remaining two positions, although nutrition related, are more diversified. The Department of Social Development utilizes the services of a Consultant in Nutrition and Dietetics on a part time basis. This is a shared position with the hospital in Yellowknife. The Department of Education employs a Coordinator of Health and Social Services. Although this position does have a nutrition component, it is not a nutritionist position.

In addition the following personnel are involved with the implementation of Nutrition Services either at the educational or technical level.

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Educational

- Dietitians/Nutritionists
- Public Health Nurses
- Hospital Nursing Staff
- Medical Staff
- Teachers
- Day Care Centre Personnel
- Social Workers
- Home Management Consultants
- Adult Educators
- Health Educators
- Community Health Representatives
- Dental Therapists

Technical

- Hospital Food Service Supervisors
- Coordinated Homecare Personnel
- Food Service Personnel in Territorial and Educational Institutions

E. ASSESSMENT

Although some nutrition services have been available in the past in the Northwest Territories, results as to the success or failure of such services have not been recorded. Essential to a Nutrition Program is a structural means of assessment to facilitate further development.

F. NUTRITION RESEARCH

Research in the field of nutrition and nutrition-related areas has not been a priority. A research component is necessary both for the development and assessment of a nutrition program.

III. FACTORS INFLUENCING NUTRITIONAL STATUS IN THE NORTHWEST TERRITORIES

A. AVAILABILITY AND USE OF COUNTRY FOODS

In many settlements country foods are the major component of the diet. For example in 1973, W.A. Bond, estimated the human consumption of fish to be over 600 lbs. per annum per person in Lac La Martre.

Although for the large part farming of country food is done for personal need, it is possible that this resource could be developed to benefit a larger segment of the population.

Analysis of the nutritional value of country foods has been carried out in the past. As most of the results yielded are for raw foods, research needs to be done on these foods in various cooked states. This information would aid the more efficient incorporation of country food into existing diets.

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B. AVAILABILITY OF COMMERCIAL FOODS

Food Selection is not only a matter of choice but is indicative of the foods available. Very often foods conducive to a good nutritional status are not available or are insufficient in supply to meet the demands of the people. This is especially true of the more isolated settlements where store food stocks are replenished on a yearly basis.

Information recently collected for the "Availability of Food in the North" Committee revealed that in the more remote settlements, such as Spence Bay, store food availability is sub-optimal. Foods offered in the local stores are not necessarily the choice of the people.

Food availability is often governed by individuals who are not familiar with either the nutritional needs of the people or the social-economic environment.

C. SHELVING OF FOOD ITEMS

Marketing research studies have shown that shelving practices influence decision making in the purchase of a commodity. Specifically, items that are presented to the consumer at eye level are chosen with greater frequency than comparable items stocked on higher or lower shelves. Similarily, items that are displayed at the front of the store or at other prime attention locations have a greater frequency of purchase.

In the settlement stores, the foods that have a low nutritional value are often found displayed at the front of the store. Reference is made here to the presentation of candy, pop and similar items.

D. STOCKING OF COMMERCIAL FOODS

As is the case in most northern settlements, food supplies, with exception of perishable items are brought in once a year. Often an amount, insufficent to meet the needs of the people, is stocked and at certain times of the year an adequate food supply is not available.

It has been noted in some settlements that a stock of nutritional foods is not always maintained on the store shelves even when supplies are available in the store warehouse.

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E. FOOD PRICES

Food prices in the Northwest Territories are generally higher than in other provinces. This may be a contributing factor to many families existing largely on starchy foods that are cheaper economically.

F. TRANSPORTATION

The high cost of transportation and unpredictable weather conditions influence food availability. Settlements not on a main transportation line receive non-perishable food items once a year. Perishable items are flown in throughout the year on a sporadic basis although a desire has been expressed for more of these items by the residents and concerned health personnel. Settlements on main transportation lines such as Cambridge Bay receive a greater variety and quantity of perishable items on a more regular basis.

G. CHANGE IN LIFE STYLE

The introduction of new foods into the native life style has resulted in eating habits that are not conducive to a good nutritional status for the native population.

Movement to the settlements has resulted in a major change in life style. Where traditionally the native hunted and fished for an existence, today there is an increasing trend towards employment and wage earning. In some larger communities hunting has become a recreational pursuit and the food supply from this source not constant. For the native who traditionally ate when hungry rather than when time dictated, the consumption of convenience foods is on the increase.

The effect of civilization on the life style and nutritional status of the Eskimo is described in the paper "When the Eskimo Comes to Town" by Dr. Otto Schaefer. With a change in lifestyle, diseases such as gall bladder disease have become more prevalent. Further evidence documenting the relationship between lifestyle change and incidence of "diseases of civilization" for both the Eskimo and people was presented in the Report of the Second Canadian Ross Conference on Pediatric Research entitled "Nutrition of Indian and Eskimo Children".

H. CONCLUSION

As discussed,food selection and hence the nutritional status of a population is affected by food availability, shelving of food items and the stocking of shelves in the stores. These latter factors are influenced by consumer behavior. What is needed is a nutrition program whereby Northerners are educated to become effective

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consumers and thereby have greater control over those factors that affect food selection.

IV. RECOMMENDED NUTRITION PROGRAMS AND SERVICES

Rationale

Nutritional needs for the people have been identified through the studies of "Nutrition Canada" in 1972. Additional findings were later related in the results of the study conducted in Arctic Bay. The latter study showed a somewhat improved nutritional state. This may be an isolated finding or conversely may be due to an actual improvement in the nutritional state following ongoing Nutrition programs. A further nutritional study will be underway in Inuvik in the spring of 1977.

Results of the Nutrition Canada Survey, 1972 reveal that many Canadians do not eat properly resulting in over and under Nutrition. Specifically the results compiled for the Eskimo and Indian populations showed that diets low in one or more nutrients were common for pregnant women, infants, school-age children, adolescents, adults and the elderly. Disease states such as heart disease and diabetes and other health related problems such as anemia can be attributed to poor eating habits.

In the past, work in the health field has been centered on the treatment rather than the prevention of disease. One of the goals of a Nutrition Program is the improved Nutritional status of the population for which the program is developed. Improved Nutrition is a necessary step in the prevention of disease.

For the purposes of this paper, under-nutrition and over-nutrition, both forms of malnutrition, will be discussed.

A. UNDER-NUTRITION

Under-nutrition occurs when the nutrients in an individual's food intake are insufficient to meet normal physiological needs. Insufficiencies may be exhibited as kwashiorkor (insufficient protein), marasmus (insufficient calories), and scurvy (insufficient Vitamin C) in the extreme cases.

In less severe cases these insufficiencies may be exhibited as tissue desaturation during which time the body is not being supplied with the nutrient or nutrients in sufficient quantity for optimal health and well being. The symptoms of biochemical or clinical lesions may not be apparent.

Clinically identifiable manifestations of nutritional deficiencies are not indicative of the nutritional status of a population group. For each recognized case of nutritional deficiency there are many unconfirmed cases and even more cases of "sub-clinical malnutrition". Clinical malnutrition may be manifested as lower resistance to infection, slow recuperation from illness, impaired response to stress or interference with work performance.

In this respect, the under-nutrition aspects of the following groups are considered.

1. Pregnant Women

   The dietary habits of the pregnant woman directly affects the nutritional status and hence the future physical and mental development of her unborn child.

   Results of the Nutrition Canada Survey revealed that the average diet of the Indian and Eskimo pregnant women sampled was low or at risk level for energy intake, vitamin C, vitamin A, calcium, vitamin D, iron and folic acid.

   Most pregnant women in the survey were referred by local health authorities. Because of this, a more superior state of health than actually exists may have been shown.

2. Infants

   Information on infant feeding practices in the Northwest Territories is scant. Guidelines do not exist to assist health professionals involved with the maintenance of an optimum nutritional status for this segment of the population.

   Data compiled from the Nutrition Canada Survey, indicates that the nutritional status of the Indian and Eskimo infants surveyed under the age of one year was sub-optimal. On the average diets were inadequate in vitamin C, vitamin A, vitamin D, calcium, iron and folic acid.

3. Children

   Nutrition Education Programs are not developed adequately for integration into a compulsory school curriculum. Guidelines do not exist to aid teachers in the execution of Nutrition Programs.

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On the average diets for Indian and Eskimo children sampled for the Nutrition Canada Survey showed unsatisfactory intakes for vitamin C, vitamin A, calcium, iron and folic acid.

4. Adolescents

Nutrition Programs required for the adolescent group need to be developed considering not only the immediate needs for this group but also the future needs of the adolescent female. The nutritional status of the adolescent female will influence both maternal health and the development of the fetus.

Results of the Nutrition Canada Survey for the Indian and Eskimo adolescent population sampled, revealed that diets were inadequate or unsatisfactory for energy, vitamin C (Eskimo), vitamin A, vitamin D, calcium, iron and folic acid intakes.

5. Adults

The nutritional status of the adult is indicative of present eating habits and the quality of Nutrition up to this point in the life cycle.

In developing Nutrition Programs for this segment of the population, the responsibilities of the parent, and consumer must be considered as well.

Data from the Nutrition Canada Survey revealed that the average adult Indian and Eskimo diet was unsatisfactory for energy, vitamin C, vitamin A (Indian women and Eskimo men and women), calcium, vitamin D, iron (Indian women and Eskimo middle aged men) and folic acid.

6. Elderly

The eating habits of the elderly individual are influenced not only by food availability but by food costs and psychological factors.

In cases where elderly people are alone the implications of this can be seen in their eating habits. Meal time may be forgotten frequently or the type of food prepared shows a lack of interest in catering to oneself.

Nutrition Education Programs are essential for the elderly to provide assistance in the proper selection, utilization and storage of food. Nutrition counselling is necessary for the elderly on modified diets. Equally desirable is a Nutrition Service that would provide nutritional meals on a regular basis.

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As indicated in the Nutrition Canada Survey, the elderly Indian and Eskimo showed a high degree of overweight but low calorie intakes. One-third of the female elderly population sampled were obese. Protein intakes were lower especially for the females. Unsatisfactory dietary intakes were found for thiamin (Indian women), vitamin C, vitamin A, calcium, vitamin D, iron and folic acid.

7. Low Income Groups

The "Report on the Relationship Between Income and Nutrition" as a result of the Nutrition Canada Survey shows an adverse relationship between income and nutritional status. It is most severe in the "lowest" income groups. The age and sex groups in this study were middle-aged men and women (40-64 years), old men (65 years +), older children and adolescents of both sexes (10 - 19 years).

Mrs. Beryl Plumtre in her book "What Price Nutrition?", February, 1975 shows through documented studies that "Canadians generally could eat nutritionally better for less expenditures".

Results from several studies indicate that Nutrition Education could help to alleviate this problem.

8. Native Groups

It is generally felt that the traditional native eating habits were conducive to a good nutritional status at that time. The problem arose with the introduction of new foods and a lack of nutrition education to assist the native consumer in selecting country or commercial foods that together would provide the basis of good nutrition.

The integration of new foods with country foods requires an education program to aid the native population in formulating good nutritional eating habits.

Results presented in this section from the Nutrition Canada Survey have been for the Indian and Eskimo populations.

B. <u>OVER-NUTRITION</u>

A state of over-nutrition is indicative of an oversupply of nutrients required to meet normal physiological needs.

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Over-nutrition is manifested as obesity and overweight and in extreme cases hypervitaminosis and mineral over-abundance.

1. Obesity

The Nutrition Canada Survey found that more than half of the adults in Canada are overweight. Overweight is associated with an excessive calorie intake and reduced physical activity. Overweight, which frequently leads to obesity, has a direct effect in physical well-being in that conditions such as cardiovascular disease may be manifested. Overweight is a problem to all age groups in the population.

In order to solve this problem nutrition services need to be developed for "Weight Control and Fitness". Such services may be provided through individual, family or group counselling.

V. NUTRITION SERVICES AND EDUCATIONAL PROGRAMS

Nutrition education is the process by which beliefs, attitudes, environmental influences, and understandings about food lead to practices that are scientifically sound, practical and consistent with individual needs and available food resources. 1*

A. IN-SERVICE TRAINING

The provision of Nutrition Education has become a function of many professions and consequently people who were not previously recognized as such are now being referred to as nutrition educators. The dietitian and nutritionist, are specifically trained as professional nutrition educators. Working in a hospital, clinic, community setting or at the administrative level, these people impart nutrition information to potentially all target groups. Other professionals such as physicians, nurses, health educators, and home economists receive formal training in nutrition but only as one part in a broader professional focus. In some cases, formal nutrition training for these professionals is not adequate being replaced by subjects that are more relevant to the immediate profession. Others who contribute to nutrition education and hence influence the nutritional status of people are parents, social workers, teachers, day care personnel, paraprofessionals in the

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1* American Dietetic Association, "Position Paper on Nutrition Education for the Public". Journal of the American Dietetic Association, 62, No. 4 (1973), 429.

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health field and advertisers. This latter group, who may not have had any formal training in nutrition are particularly vulnerable to nutrition misinformation.

It has been recognized that the responsibility of nutrition education can no longer be delegated totally to the dietitian or nutritionist. As knowledge in the field of nutrition broadens; public needs increase and other professionals or paraprofessionals are involved in the many aspects of nutrition and health, some of the responsibility of nutrition education has to be delegated to the other professions. To this end in-service training sessions are proposed. The Department of Social Development would assume responsibility for providing this service, however, where these in-service training workshops or seminars contribute to a recognized Department of Education training program, the objectives of the seminar or workshop will be planned jointly with the Department of Education to ensure recognition of the learning experience.

1. Conduct workshops and seminars for professionals such as teachers, educators of adults, continuing education instructors, and lay persons such as Day Care personnel who are responsible for the presentation of the nutrition education component at all levels in the educational system.

2. Conduct workshops and seminars to upgrade the nutrition education of health professionals such as medical doctors, nurses and public health nurses who have the responsibility of diagnosing, prescribing and treating medical and non-medical problems associated with nutrition and who provide counselling at the individual, family and community level.

3. Conduct workshops and seminars to provide nutrition information for professionals and lay persons such as social workers and homecare personnel who have a one-to-one relationship with community members requiring assistance with problems related to nutrition.

4. Conduct workshops and seminars for personnel responsible for group food service in correctional centres, hostels, group homes, schools, hospitals, etc.

5. Conduct workshops and seminars for food service personnel of restaurants and hotels providing meal service to the public.

B. EARLY CHILDHOOD NUTRITION EDUCATION

Food habits and attitudes toward food develop early in life. Often before a child has reached the age to enter school, lifetime eating patterns have been established. This behavior is learned primarily from the parents. Not to be underestimated is the influence of television and others who are in the position to influence the eating habits of the young child such as Day Care personnel. Therefore it is recommended that:

1. Preventive nutrition education programs be developed with the parents and others who influence the eating habits of the young child as the primary target groups.

2. Guidelines be developed for basic Nutrition Education in Day Care Centres to facilitate the incorporation of Nutrition Education into the daily activities of the pre-schooler.

3. Guidelines be developed for infant feeding practices to ensure consistency in the nutrition information that is presented to the mother from sources such as physicians, public health nurses, nutritionists, etc.

In-School Nutrition Education

Nutrition Education initially presented to the young child should be continued as an integral component in the curriculum requirements at all levels in the elementary and secondary school systems.

The existing nutrition component should be revised to respond to present identified needs and to ensure that basic concepts in nutrition education are continuous through all levels of school.

C. COMMUNITY NUTRITION EDUCATION

To assist the consumer in selecting foods conducive to a good nutritional status and realizing the potential effect in the family unit both physically and economically, the following community nutrition education components are proposed. Where applicable all material will be presented in both English and native languages.

1. Nutrition workshops for consumers.

2. Editorials and columns in newspapers.

3. Nutrition information programs and "spots" through the news media such as television and radio.

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4. Development of pamphlets and posters on nutrition, food selection, food preparation and storage, nutritional value of native foods, comparative analysis of nutrient composition of foods.

5. Distribution of relevant printed material to residents of the Northwest Territories in general and to specific target groups such as managers of food stores.

6. Guidelines be developed for Home Management, Department of Education, to ensure a comprehensive nutrition component to these programs.

D. SPECIAL TARGET GROUPS

Nutrition guidelines must be developed to ensure that Nutrition Education programs and the nutrition component of services provided for the special target groups are comprehensive, continuous and consistent with current findings in the field of nutrition.

Special target groups to be considered:

1. prenatal groups
2. postnatal groups
3. elderly
4. pre-maternal and family planning
5. low income groups
6. native groups

E. NUTRITION COUNSELLING

Counselling on a one-to-one basis for problems of obesity, modification of special diets and normal nutrition is available in some centres in the Northwest Territories. Where it is not feasible that this service can be provided by a dietitian or nutritionist on a continual basis, guidelines should be developed to assist professionals such as public health nurses in providing this service.

F. MEAL ASSISTANCE

A "Meals on Wheels" program has been implemented in one major centre in the Northwest Territories. The development of similar programs in other centres would assist the elderly and those incapable of meal preparation due to handicap, illness or inadequate facilities. Guidelines developed for the nutritional component of this program would facilitate in the provision of nutritious meals.

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G. PUBLIC INFORMATION SERVICES

It is feasible that a service such as "Dial-A-Dietitian" could be provided in centres where qualified dietitians or nutritionists are located. Through this service the public would be offered advice on matters pertaining to diet and nutrition when requested via the telephone.

VI. PROPOSED STAFFING

The objective of a Nutrition Program is to improve the nutritional status of the people for whom the program is developed. Through Nutrition services, the individual is educated to assume responsibility for behaviour to enhance the overall quality of life. Nutrition education is directed toward the promotion of optimum nutritional status and the prevention of disease having a nutrition component.

In order to meet the objective of a Nutrition Program, personnel qualified in the field of nutrition are required at all levels in the community. Reference is made to the Federal/Provincial Position Paper on Nutrition Positions in Community Health Services. Recommendations as outlined in this paper are adapted to the specific needs of the Northwest Territories.

A. COORDINATOR OF NUTRITION SERVICES - SUMMARY OF RESPONSIBILITIES

- Assesses the nutritional needs of the population; establishes priorities and policies to meet the needs.

- Assesses the capabilities of existing nutrition services.

- Develops guidelines for nutrition education, programs and services.

- Participates in the development of educational program design; assesses educational materials; recommends methods of evaluation; evaluates existing educational programs for nutritional content.

- On request participates in the implementation of educational programs; the development of educational materials and teaching methods for the educational programs.

- Collects, coordinates and interprets nutrition information for regional nutritionists, clinical-administrative nutritionists, government departments, mass media, community agencies, lay leaders and the general population.

- Plans and initiates applied nutrition research and field studies.

- Coordinates nutrition services provided by regional nutritionists and clinical-administrative nutritionists.

- Provides consultative services to health, education, recreation and social services planners; government departments and other agencies providing programs and services with a nutrition component.

B. REGIONAL NUTRITIONISTS - SUMMARY OF RESPONSIBILITIES

- Assesses the nutritional needs of the region; provides pertinent information to be used in the establishment of priorities and policies to meet the needs.

- Compiles data on existing nutrition services and other community resources provided within the region.

- On request participates in the implementation of educational programs; the development of educational materials and methods for the educational programs.

- Conducts applied nutrition research and field studies.

- Provides consultative services to health, education, recreation and social services planners, government departments and other agencies providing programs and services with a nutrition component at the regional and/or community level.

C. CLINICAL-ADMINISTRATIVE DIETITIAN/NUTRITIONIST - SUMMARY OF RESPONSIBILITIES

- Responsible for efficient administration of Food Service Department of Health Centre.

- Provides direct nutrition counselling on the normal and therapeutic aspects of nutrition to individuals and groups.

- Provides nutrition information to individuals or organizations within the community.

- In-service training for health related professionals within the Health Centre.

- Provides advice to small institutions, receiving homes and schools on all aspects of food service.

- Cooperates with related health, education and social service professionals within the Health Centre.